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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of:

Nobutaka ISHIDERA, et al.

Serial No. 10/629,604

Group Art Unit: 2116

Confirmation No. 6112

Filed: July 30, 2003

Examiner: TRUJILLO, JAMES K

For: TERMINAL DEVICE HAVING POWER SAVING MODE AND FOLDING MECHANISM  
ENABLING OPEN/CLOSE MOTION OF THE SAME

**SUBMISSION OF VERIFIED ENGLISH TRANSLATION OF  
PRIOR INTERNATIONAL APPLICATION UNDER 37 C.F.R. 1.78**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

According to 37 C.F.R. 1.78, to perfect the Applicants' foreign priority filing date. Verified English translations of the following certified international priority applications of the above-identified US patent application are submitted:

International Application: PCT/JP01/00994 and

Filed: February 13, 2001

International Application: PCT/JP02/01056

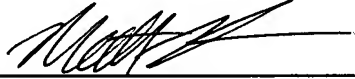
Filed: February 7, 2002

A Declaration regarding the verification of the English translations is submitted concurrently herewith.

It is respectfully requested that the Applicants be given the benefit of the foreign filing date as evidenced by the certified international priority application submitted and the verified English translation thereof submitted herewith, in accordance with the requirements of 35 U.S.C. 365.

Respectfully submitted,  
STAAS & HALSEY LLP

Date: July 12, 2007

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## 特許協力条約に基づく国際出願願書

原本（出願用） - 印刷日時 2001年02月08日（08.02.2001）木曜日 11時04分16秒

0	受理官庁記入欄	
0-1	国際出願番号.	
0-2	国際出願日	
0-3	(受付印)	
0-4	様式-PCT/RO/101 この特許協力条約に基づく国際 出願願書は、 0-4-1 右記によって作成された。	PCT-EASY Version 2.91 (updated 01.01.2001)
0-5	申立て 出願人は、この国際出願が特許 協力条約に従って処理されるこ とを請求する。	
0-6	出願人によって指定された受理 官庁	日本国特許庁 (RO/JP)
0-7	出願人又は代理人の書類記号	0052347
I	発明の名称	節電モードを有するネットワーク端末
II	出願人	
II-1	この欄に記載した者は	出願人である (applicant only)
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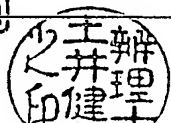
原本(出願用) - 印刷日時 2001年02月08日 (08.02.2001) 木曜日 11時04分16秒

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III-2-1	この欄に記載した者は	
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IV-1-4	ファクシミリ番号	
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IV-2-1ja	氏名	土井 健二 DOI, Kenji
IV-2-1en	Name(s)	
V	国の指定	EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR 及びヨーロッパ特許条約と特許協力条約の締約国である他の国
V-1	広域特許 (他の種類の保護又は取扱いを求める場合には括弧内に記載する。)	
V-2	国内特許 (他の種類の保護又は取扱いを求める場合には括弧内に記載する。)	JP US

## 特許協力条約に基づく国際出願願書

0052347

原本（出願用） - 印刷日時 2001年02月08日（08.02.2001）木曜日 11時04分16秒

V-5	指定の確認の宣言 出願人は、上記の指定に加えて、規則4.9(b)の規定に基づき、特許協力条約のもとで認められる他の全ての国の指定を行う。ただし、V-6欄に示した国の指定を除く。出願人は、これらの追加される指定が確認を条件としていること、並びに優先日から15月が経過する前にその確認がなされない指定は、この期間の経過時に、出願人によって取り下げられたものとみなされることを宣言する。		
V-6	指定の確認から除かれる国	なし (NONE)	
VI	優先権主張	なし (NONE)	
VII-1	特定された国際調査機関(ISA)	日本国特許庁 (ISA/JP)	
VIII	照合欄	用紙の枚数	添付された電子データ
VIII-1	願書	4	-
VIII-2	明細書	11	-
VIII-3	請求の範囲	2	-
VIII-4	要約	1	0052347.txt
VIII-5	図面	9	-
VIII-7	合計	27	
VIII-8	添付書類	添付	添付された電子データ
VIII-8	手数料計算用紙	✓	-
VIII-9	別個の記名押印された委任状	✓	-
VIII-10	包括委任状の写し	✓	-
VIII-16	PCT-EASYディスク	-	フレキシブルディスク
VIII-17	その他	納付する手数料に相当する特許印紙を貼付した書面	-
VIII-17	その他	国際事務局の口座への振込みを証明する書面	-
VIII-18	要約書とともに提示する図の番号	7	
VIII-19	国際出願の使用言語名:	日本語 (Japanese)	
IX-1	提出者の記名押印		
IX-1-1	氏名(姓名)	林 恒徳	
IX-2	提出者の記名押印		
IX-2-1	氏名(姓名)	土井 健二	

受理官庁記入欄

10-1	国際出願として提出された書類の実際の受理の日	
10-2	図面:	
10-2-1	受理された	
10-2-2	不足図面がある	
10-3	国際出願として提出された書類を補完する書類又は図面であってその後期間内に提出されたものの実際の受理の日(訂正日)	

## 特許協力条約に基づく国際出願願書

0052347

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10-4	特許協力条約第11条(2)に基づ く必要な補完の期間内の受理の 日	
10-5	出願人により特定された国際調 査機関	ISA/JP
10-6	調査手数料未払いにつき、国際 調査機関に調査用写しを送付し ていない	

## 国際事務局記入欄

11-1	記録原本の受理の日	
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## SPECIFICATION

[TITLE OF THE INVENTION] NETWORK TERMINAL DEVICE HAVING  
POWER SAVING MODE

### 5 [TECHNICAL FIELD]

The present invention relates to a network terminal device, which is connectable to a network and has a power saving mode, and more particularly a network terminal device, which automatically executes predetermined  
10 processing in response to cancellation of the power saving mode.

### [BACKGROUND OF THE INVENTION]

In a network terminal device (for example, a personal  
15 computer), which is connectable to a network for the purpose of using the Internet or the electronic mail, there is generally provided a power saving mode. This power saving mode is a function of reducing power consumption by suspending power supply to a predetermined device unit  
20 (display unit, memory, etc.) constituting computer equipment when there is no user operation continued for a certain period. When any operation (for example, operation by use of a mouse, a keyboard, etc.) is performed by the user after the network terminal device enters the  
25 power saving mode, the power saving mode is cancelled and the network terminal device is restored to a normal mode, that is, a mode before shifting to the power saving mode.

Accordingly, when the user wants to access a network such as the Internet using the network terminal device which is already shifted to the power saving mode, it is necessary for the user to perform a certain operation for canceling  
5 the power saving mode once, and then activate a browser program or the like when any browser program or the like required for accessing the network has not been activated. Furthermore, it is necessary to input a desired URL (Uniform Resource Locator). In such a way, various operations are  
10 required in the network terminal device access the desired URL through the network. This produces inconvenience to user.

#### [DISCLOSURE OF THE INVENTION]

15 Accordingly, it is an object of the present invention to provide a network terminal device enabling to access a predetermined URL on a network when restoring the operation mode from a power saving mode to a normal mode by a simpler operation than before.

20 In order to attain the above-mentioned objects, the network terminal device automatically performs access processing against a URL, which is provided on a network and registered in advance, in response to a cancellation operation of the power saving mode. This enables to access  
25 a predetermined URL on the network only by the cancellation operation of the power saving mode, which brings about improved convenience to the user as well as improved



operability of the network terminal device.

Preferably, in accordance with the present invention to attain the aforementioned objects, a network terminal device having a power saving mode in which the network terminal device works with less power consumption than in a normal working mode is constituted of; a first display section in which display is turned off during the power saving mode, and the display is resumed when returning to the normal working mode; a storage section storing at least one URL on a network; a second display section which displays either the URL stored in the storage section or identification information corresponding to the URL at least during the power saving mode; and an access processing section which performs access processing against either the URL displayed on the second display section or the URL corresponding to the identification information, in response to a cancellation operation of the power saving mode. The access processing section is realized by, for example, a firmware which is incorporated in the second display section.

Preferably, depending on a URL type, the access processing section activates an application program necessary for accessing the URL, and the application program makes access to the URL. For example, when the URL type is a type designating a Web page address on the network, the access processing section activates a browser program. Also, when the URL type is a type designating an electronic

mail address, the access processing section activates a mail program.

Preferably, the storage section stores either a URL which has been accessed last time before shifting to the power saving mode, or an arbitrary URL according to an instruction by a user. Further, the network terminal device according to the present invention may further include a first operation section for selecting either the URL or the identification information corresponding to the URL displayed on the second display section from the plurality of URLs when the storage section stores a plurality of URLs.

Further, in the above-mentioned configuration of the network terminal device according to the present invention, the first display section is mounted so as to be opened and closed against a main body of the network terminal device, and the second display section is disposed in a visible position when the first display section is placed in a closed condition. Moreover, preferably, the network terminal device according to the present invention may further include a second operation section for use in canceling the power saving mode, which is disposed in an operable position while the first display section is placed in the closed condition. Also, the network terminal device may include a drive section enabling to open the first display section, which is closed in the power saving mode, in response to the cancellation operation of the power saving mode.

[BRIEF DESCRIPTION OF THE DRAWINGS]

FIGS. 1, 2, 3, 4, 5 and 6 show diagrams illustrating an outline of the network access processing in accordance with an embodiment of the present invention.

FIG. 7 shows an exemplary block configuration of a network terminal device in accordance with the embodiment of the present invention.

FIG. 8 shows a flowchart of a BIOS setting import processing at the time of system activation.

FIG. 9 shows a flowchart of processing for shifting to a power saving mode and for canceling the power saving mode.

FIG. 10 shows a flowchart of a first accessing processing to a URL at the time of power saving mode cancellation.

FIG. 11 shows a flowchart of a second accessing processing to a URL at the time of power saving mode cancellation.

FIG. 12 shows a flowchart illustrating URL selection and display processing.

FIG. 13 shows an exemplary URL data configuration stored in a URL memory 24.

FIG. 14 shows a display example on a subordinate display section 20.

FIG. 15 shows an exemplary mounting structure of subordinate display section 20, etc.

[DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS]

The preferred embodiments of the present invention are described hereinafter referring to the charts and  
5 drawings. However, it is to be noted that the scope of the present invention is not limited to the embodiments described below.

According to an embodiment of the present invention, a network terminal device executes access processing to  
10 a URL on a network, which is registered in advance, in response to a cancellation operation of a power saving mode. Hereinafter, the embodiment of the present invention will be illustrated by exemplifying a notebook personal computer as a network terminal device, which is provided with a main  
15 display section and a subordinate display section. Here, the main display section is a display section of comparatively large screen size (such as a liquid crystal display unit and a CRT display unit), on which display screen contents generated (or obtained) by a browsing program or  
20 other application programs are displayed. Display on the main display section is turned off during the power saving mode, and the display is resumed to turn on when returning to the normal mode. In contrast, the subordinate display section is a display section of comparatively small display  
25 size on which a remaining battery capacity, access conditions to various devices, etc. are displayed. Most of the subordinate display sections mounted on notebook

personal computers are formed of liquid crystal display units.

FIGS. 1 through 6 show diagrams illustrating an outline of network access processing in accordance with the embodiment of the present invention. In FIG. 1, there is activated an application program (such as a spreadsheet program) other than an application program for network access (browser). Inside the notebook personal computer, a variety of devices such as a CPU, a memory and a hard disk drive (which are not shown) are housed. Also, a keyboard is disposed on a main body of the notebook personal computer. The main display section is attached on a main body of the personal computer in such a way that the main display section can be opened or closed against the main body. While the main display section is closed against the main body, a user of the notebook personal computer is neither able to look at a screen of the main display section, nor to operate the keyboard. In addition, an external input device such as a mouse may be connected onto the main body of the notebook personal computer.

During a condition of a predetermined application program being activated, when the notebook personal computer is shifted to the power saving mode, a display screen of the main display section is turned off, as depicted in FIG. 2. In addition, at this time, the main display section may also be closed, as shown in FIG. 3.

Even in the power saving mode, display on the

subordinate display section of the notebook personal computer is not turned off, and a predetermined URL is displayed thereupon, as shown in FIG. 4. Here, it is also possible to configure such that a URL to be displayed on  
5 the subordinate display section is altered when a predetermined operation is performed. Thereafter, the power saving mode is canceled. The cancellation of the power saving mode is enabled, for example, by depressing a predetermined switch which is operable even when the main  
10 display section is closed, or depressing a key on the keyboard when the main display section is open, or operating the mouse. Here, as shown in FIG. 5, when the main display section is closed, the main display section is opened again.

According to the embodiment of the present invention,  
15 in response to the cancellation of the power saving mode, a program for accessing the URL designated in the subordinate display section is automatically activated, as shown in FIG. 6. For example, when the URL indicates an electronic mail address, an electronic mail  
20 transmission/reception program is automatically activated, or when the URL indicates a Web address in the Internet, a browser program is automatically activated. Such a program then accesses the designated URL, and a screen corresponding to the designated URL is displayed on the  
25 main display section.

In such a way, according to the embodiment of the present invention, the network terminal device automatically

accesses the URL displayed on the subordinate display section, on restoration from the power saving mode to the normal mode. Thus, it becomes possible to simplify operations performed by the user. The embodiment of the present invention will be illustrated more specifically in the following description.

FIG. 7 shows a diagram illustrating an exemplary block configuration in accordance with the embodiment of the present invention. In FIG. 7, the network terminal device provides a CPU 10, which executes the OS (operating system) and a variety of application programs stored in a main storage section (hard disk drive, or HDD) 12. A main display section (liquid crystal display unit) 14 displays information corresponding to an application program which is executed based on a normal operation by a user. Further, an input section 16 is constituted of a keyboard, a mouse, etc. When there has been no predetermined operation against input section 16 for a certain period, CPU 10 is shifted from the normal mode to the power saving mode.

ABIOS (Basic Input Output System) memory 18 is a memory storing the BIOS. Setting information related to the power saving mode, such as a designation to enable or disable the power saving mode, a time until starting the transition to the power saving mode, is stored in this BIOS memory.

As mentioned earlier, a subordinate display section 20 is a display section of comparatively small size, which displays information of a remaining battery capacity in

the network terminal device, conditions of accessing a variety of devices, and the like. According to the embodiment of the present invention, there is displayed on subordinate display section 20 a URL to be automatically  
5 accessed at the time of restoring from the power saving mode to the normal mode. Further, in subordinate display section 20, there are incorporated a program(s) (firmware) which enables processing function(s) required for the embodiment of the present invention, and a processor which  
10 executes such a program.

Further, an auxiliary operation section 22 is provided with, for example, a selection key, an execution key, etc. The selection key is a key for selecting one of a plurality of items which can be displayed on subordinate display  
15 section 20, as well as displaying the selected item. The selection key is exemplarily constituted of a jog dial. The jog dial has a wheel, and a display item can be altered by rotating the wheel. Also, by depressing the wheel, the display content being displayed at the moment can be  
20 selected. Such a selection key is not only limited to a single jog dial. For example, the selection key may also be constituted of a plurality of buttons, such as buttons for proceeding to the next item, returning to the previous item, fixing on the current item, scrolling right, and  
25 scrolling left. Further, subordinate display section 20 may also include a touch panel function. An operation identical to a selection key operation may be effected when



the user touches an area displayed as a selection key area on subordinate display section 20.

When there is a single display item only to be displayed, the selection key is no need to operate, needless to say.

5 Next, the execution key is a key for terminating the power saving mode, activating a predetermined application program, and accessing the URL displayed on subordinate display section 20. The execution key is disposed in such a position as is operable even when the main display section

10 is in the closed condition. This enables to execute the processing in the embodiment of the present invention, even when the keyboard is not operable because the main display section is closed, or the mouse is not connected. Needless to say, it may also be possible to cancel the power saving

15 mode by operating the keyboard or the mouse. In addition, it may also be possible to provide the selection key and the execution key independently, or otherwise, adopt other operation means (for example, a jog dial) to be commonly used for the functions of the selection key and the execution

20 key.

Moreover, a URL memory 24 is a storage means, in which a URL to be displayed on subordinate display section 20 is stored. In this memory, there are stored a history of the URLs accessed in the past, and a URL either selected

25 or input by a predetermined means. As URL memory 24, a portion of an area in the hard disk drive (HDD) may be allocated, or a nonvolatile memory may be mounted separately.

The network terminal device in accordance with the present invention has the following functions: (1) Importing the BIOS setting at the time of the system activation, (2) shifting to the power saving mode, (3) 5 accessing a URL at the time of canceling the power saving mode, and (4) selecting and displaying a URL at the time of the normal mode and the power saving mode. Each function will be illustrated further in the following description.

FIG. 8 shows a flowchart illustrating the BIOS setting 10 importing processing performed at the time of the system activation. This processing is carried out under the OS. In FIG. 8, the OS is activated when the power is switched on (step S11). The OS reads out from BIOS memory 18 information related to the power saving mode, which 15 includes a power saving mode enable flag, and time information indicating a time until shifting to the power saving mode (S12). This information is then stored into a storage area (in HDD, main memory, or the like) managed by the OS, which is referred to as an OS management area 20 (S13). In such a way, the OS obtains the information related to the power saving mode in advance, and stores the information into the OS management area, thus it becomes possible for the OS to perform transition processing to the power saving mode.

25 FIG. 9 shows a flowchart illustrating the transition processing to the power saving mode. This processing is also executed under the OS. First, the OS monitors whether

or not there is any input received from the input section such as the keyboard or the mouse (S21), and measures an interval between the inputs by use of a system timer provided in the network terminal device. When there is an input before  
5 the time preset in the timer expires (S22), the OS resets the system timer (S23) and starts the time measurement afresh. When the preset time has elapsed without any input (S22), the network terminal device is shifted to the power saving mode (S24). More specifically, a power supply  
10 control against each device in the network terminal device is shifted to the BIOS, and the BIOS suspends to supply the power to the predetermined units (such as HDD and CPU) in the network terminal device.

FIG. 10 shows a flowchart of a first access processing  
15 to a URL at the time of canceling the power saving mode. This processing is executed by the firmware provided in subordinate display section 20. In the power saving mode, the firmware of subordinate display section 20 monitors whether or not there is any input received from either input  
20 section 16, such as the keyboard or the mouse, or auxiliary operation section 22 (S31). When an input is detected, the firmware notifies the BIOS of this detection. This produces the power supply control to shift from the BIOS to the OS, and the OS resumes the power supply to the units to which  
25 the power supply has been suspended. Thus, the power saving mode is canceled (S32). Thereafter, the OS obtains the URL displayed on the subordinate display section 20 (S33), and

checks whether or not an application program necessary for  
accessing the URL has already been activated (S34). When  
such an application program has not been activated yet,  
the OS activates the application program (S35), and reports  
5 the URL to the application program concerned (S36).  
Consequently, the network terminal device is resumed to  
the normal mode, and the application program having been  
activated in the normal mode starts accessing to the URL,  
which was received.

10 In the above process, the firmware provided in  
subordinate display section 20 selects an application  
program to be activated in accordance with a format of the  
URL. For example, if the URL has a format of 'http:// ...',  
this URL denotes a Web page address, and accordingly, a  
15 browser application program is selected. If the URL has  
a format of 'mailto: ...', this URL denotes an electronic  
mail address, and accordingly, an application program for  
the electronic mail is selected. Or, if the URL has a format  
of 'ftp:// ...', an application program for the file transfer  
20 protocol (FTP) is selected. Here, when the browser  
application program was selected corresponding to the URL  
format, the browser application program is instructed to  
obtain and display a Web page denoted by the URL concerned.  
When the electronic mail application program was selected  
25 corresponding to the URL format, the electronic mail  
application program is instructed to generate an electronic  
mail, which is addressed to a mail address denoted by the

URL concerned. Also, when the FTP application program was selected corresponding to the URL format, the FTP application program is instructed to download a file denoted by the URL concerned. In addition, generally, a  
5 URL having the 'http:// ...' format is the URL by which a browser application program is to be selected. However, depending on a file to be accessed by the URL concerned, there may be required other application programs oriented for each purpose, such as playing MIDI data, regenerating  
10 other voice data, and regenerating moving images. In such cases, it is possible to employ application programs prepared for respective purposes. Information on which application program is required is obtained from the settings of the browser application program.

15 Also, it may be possible to configure such that the main display section is automatically opened when the power saving mode is canceled while the main display section is placed in the closed condition. For this purpose, the network terminal device may incorporate a drive means such  
20 as a motor so as to open the main display section automatically. In response to the cancellation of the power saving mode, the firmware in subordinate display section  
20 opens the main display section to an appropriate preset angle against the main body by driving the motor, when the  
25 main display section is placed in a closed condition.

FIG. 11 shows a flowchart of a second access processing to a URL at the time of canceling the power saving mode,

in which identical reference numbers are respectively assigned to the processes which are identical to those shown in FIG. 10. In FIG. 11, the firmware in subordinate display section 20 monitors whether or not there is any input from either input section 16 or auxiliary operation section 24 (S31). When an input is detected, the power saving mode is canceled (S32).

Thereafter, it is checked whether or not the main display section is closed (S32-1). When the main display section is closed, the body is opened to a predetermined angle by driving the drive means (S32-2). The information related to the URL displayed on subordinate display section 20 is obtained (S33), and it is checked whether an application program necessary for accessing the URL of interest has already been activated (S34). When the application program is not activated yet, the program of interest is activated (S35), and the URL is informed to the application program of interest (S36). Thus, the network terminal device is restored to the normal mode, and the application program being activated in the normal mode starts to access the received URL.

Depending on the URL accessed, a voice data file (for example, a file having the MP3 format may possibly be designated. In such a case, only an application program for voice data regeneration may be activated so as to regenerate the voice data file concerned, neither opening the main display section nor activating the browser

application program. Accordingly, the main display section is not opened when any file unnecessary for opening the main display section is specified. Thus, convenience to the user can be attained.

5        FIG. 12 shows a flowchart of URL selection and display processing. This processing is performed by the firmware in subordinate display section 20. In addition, this processing is performed irrespective of under the normal mode or the power saving mode. The firmware in subordinate display section 20 monitors whether or not an interruption  
10       input for URL selection exists (S40). More specifically, the firmware monitors whether or not an operation of the selection key (jog dial) in auxiliary operation section 22 is performed. On detection of the operation of the jog dial, URLs stored adjacent (previous or next) to the  
15       currently displayed URL among a plurality of URLs, which are reserved in order in URL memory 24, are successively selected and displayed (S41). The selection of either forward or backward direction is determined by the rotation  
20       direction of the jog dial.

Now, exemplary methods of storing a URL into URL memory 24 are described in the following. In order to store a URL into URL memory 24, the following methods may be considered:  
(1) The firmware provided in subordinate display section  
25       20 monitors URL which are output from application programs such as a browser (which is exemplified in the following description), obtains the output URL, and stores the URL

into URL memory 24. (2) A URL storing menu is provided in the browser, and based on a menu selection operation by the user, the browser stores at least one URL either input or selected on the browser into URL memory 24. (3) By means  
5 of an add-in function provided in the browser, the browser automatically stores at least one URL determined on the browser into URL memory 24. (4) Another menu storing URLs is provided in the browser, and based on a menu selection operation, at least one URL described in the currently  
10 displayed Web page is collectively stored into URL memory 24.

In case of above-mentioned (1), URL memory 24 stores at least the URL having been accessed last time before the transition to the power saving mode. Further, it may also  
15 be possible to display the URL of interest on subordinate display section 20 at the initial setting. If URL memory 24 stores a predetermined number of URLs having been accessed in the past, it may also be possible to set in the initial setting so as to display the last URL having  
20 been accessed before the transition to the power saving mode. By use of the aforementioned selection key, any of other URLs may be selected. Further, in case of (4), the browser analyzes the Web page and extracts a URL described in the Web page.

25 FIG. 13 shows an exemplary configuration of a URL data stored in URL memory 24. The URL data is constituted of an identification number (sequence number), a URL and



display contents (identification information)  
corresponding thereto.

FIG. 14 shows a display example on subordinate display  
section 20. In FIG. 14 (a), an Internet Web page address  
5 (URL) is displayed in addition to the battery charge  
condition and the mounted condition of an optical disk such  
as a CD-ROM. Or, it may also be possible to display a title  
(the above-mentioned identification information) attached  
to the URL in place of the URL itself, as shown in FIG.  
10 14 (b). When a title is assigned in advance on the Web page  
data (HTML file) corresponding to the URL, this title may  
be used, or otherwise, an arbitrary title may be set by  
the user. Moreover, as shown in FIG. 14 (c), it may also  
be possible to provide a touch panel function in subordinate  
15 display section 20, on which auxiliary operation section  
22 (including an execution button and a selection button)  
is displayed.

FIG. 15 is a diagram illustrating an exemplary mounting  
structure of subordinate display section 20 and the like.  
20 As shown in FIG. 15 (a), preferably, subordinate display  
section 20 is mounted in such a position as can be viewed  
by the user even when the main display section is placed  
in the closed condition. This is because the main display  
section is possibly closed in the power saving mode. Further,  
25 preferably, auxiliary operation section 22 is also mounted  
in such a position as is operable by the user even when  
the main display section is closed. Or, as shown in FIG.

15 (b), it may also be possible to dispose subordinate display section 20, auxiliary operation section 22 and URL memory 24 separately as independent units. In this case, the aforementioned processing and operation is achieved  
5 by connecting these external independent units to the notebook personal computer. Moreover, as shown in FIG. 15 (c), the functions of subordinate display section 20 and auxiliary operation section 22 may also be attained by use of a portable telephone. By use of a communication program  
10 conforming to a predetermined communication standard, it is possible to utilize a screen of the portable telephone functioning as subordinate display section 20, as well as dial buttons of the portable telephone functioning as auxiliary operation section 22. Further, a storing medium  
15 incorporated in the portable telephone is used as URL memory 24.

#### [INDUSTRIAL APPLICABILITY]

As the present invention has been described, in the  
20 network terminal device according to the present invention, access processing to a URL registered in advance on a network is automatically executed in response to the cancellation operation of the power saving mode. This enables to execute accessing the predetermined URL on the network only by the  
25 cancellation operation of the power saving mode without need of an extra operation for the processing. Thus, operability of the terminal is improved, and as a result,

convenience for the user is improved.

The foregoing description of the embodiments is not intended to limit the invention to the particular embodiments illustrated. The scope of the present invention  
5 runs to the inventions described in the appended claims and the equivalents thereof.

## CLAIMS

1. A network terminal device having a power saving mode in which the network terminal device works with less power consumption than in a normal mode, said terminal  
5 device comprising:

a first display section where the display is turned off during the power saving mode and resumed when restored to the normal mode;

a storage section which stores at least one URL on  
10 a network;

a second display section which displays either the URL stored in the storage section or identification information corresponding to the URL at least during the power saving mode; and

15 an access processing section which executes access processing against the URL, or a URL corresponding to the identification information, displayed on the second display section in response to a cancellation operation of the power saving mode.

20

2. The network terminal device according to claim 1, wherein, depending on a URL type, the access processing section activates an application program necessary for accessing the URL, and

25 said application program makes access to the URL.

3. The network terminal device according to claim 2,

wherein, when the URL type is a type designating a Web page address on the network, the access processing section activates a browser program, and

when the URL type is a type designating an electronic  
5 mail address, the access processing section activates a mail program.

4. The network terminal device according to claim 1,  
wherein the storage section stores a URL accessed last  
10 time before shifting to the power saving mode.

5. The network terminal device according to claim 1,  
wherein the storage section stores an arbitrary URL  
according to an instruction by a user.

15

6. The network terminal device according to claim 1,  
wherein in the case the storage section stores a plurality of URLs, the network terminal device further comprises:

20 a first operation section for selecting a URL, or identification information corresponding to the URL, displayed on the second display section out of the plurality of URLs.

25 7. The network terminal device according to claim 1,  
wherein the first display section is mounted so as to be opened and closed against a main body of the network

terminal device, and

the second display section is disposed in a visible position when the first display section is placed in a closed condition.

5

8. The network terminal device according to claim 7, further comprising:

a second operation section for canceling the power saving mode, being disposed in an operable position while  
10 the first display section is placed in the closed condition.

9. The network terminal device according to claim 7, further comprising:

a drive section which enables to open the first display  
15 section being closed in the power saving mode, in response to the cancellation operation of the power saving mode.

## ABSTRACT OF DISCLOSURE

There is provided a network terminal automatically  
executing access processing to a URL registered in advance  
5 on a network in response to the cancellation operation of  
the power saving mode. This enables to execute accessing  
the predetermined URL on the network only by the  
cancellation operation of the power saving mode without  
need of an extra operation for the processing. Thus  
10 operability of the network terminal is improved, and as  
a result, convenience for the user is improved.

FIG. 1

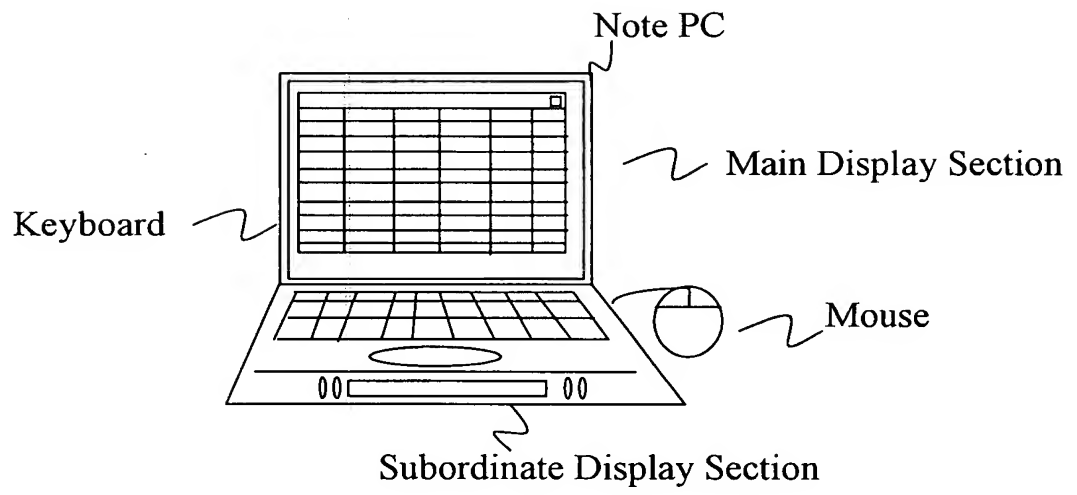


FIG. 2

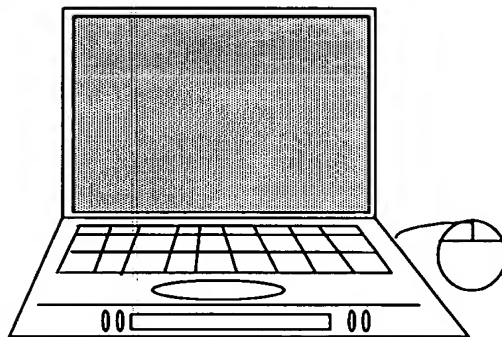
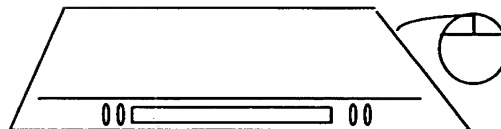
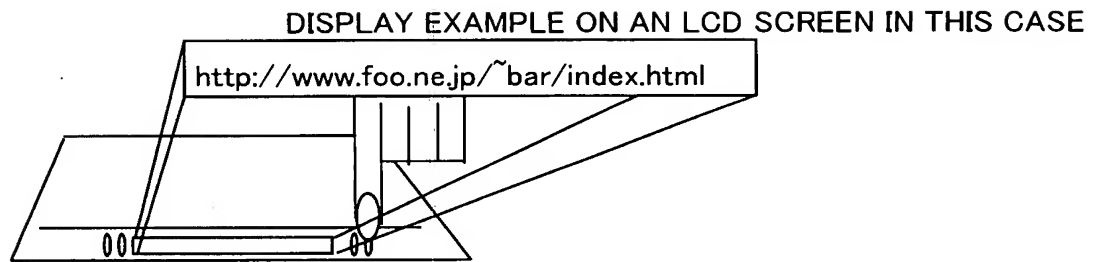


FIG. 3

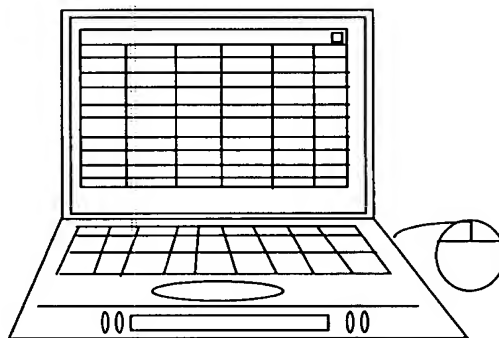




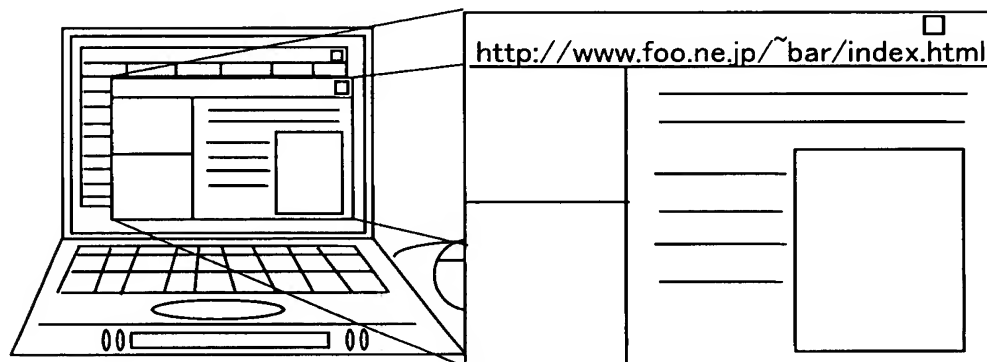
**FIG. 4**



**FIG. 5**



**FIG. 6**



**FIG. 7**

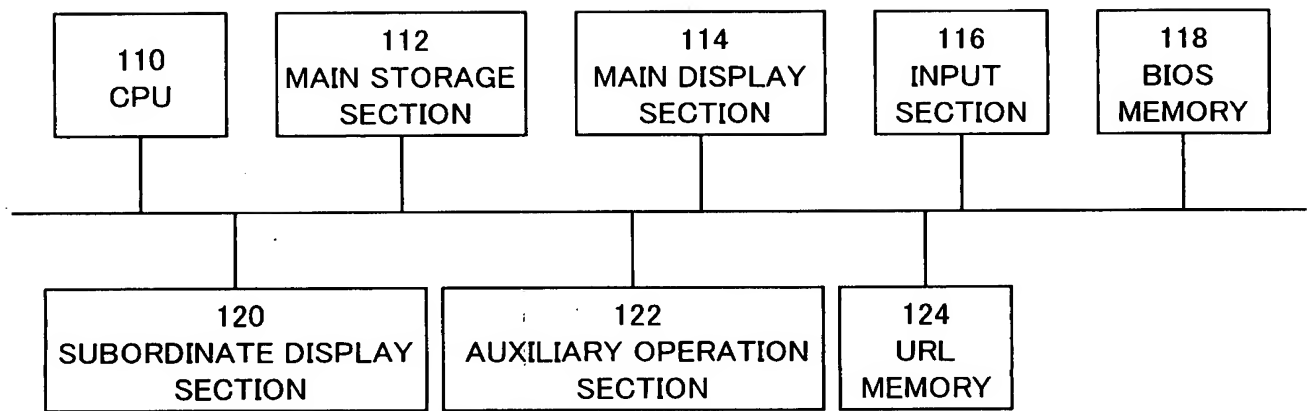


FIG. 8

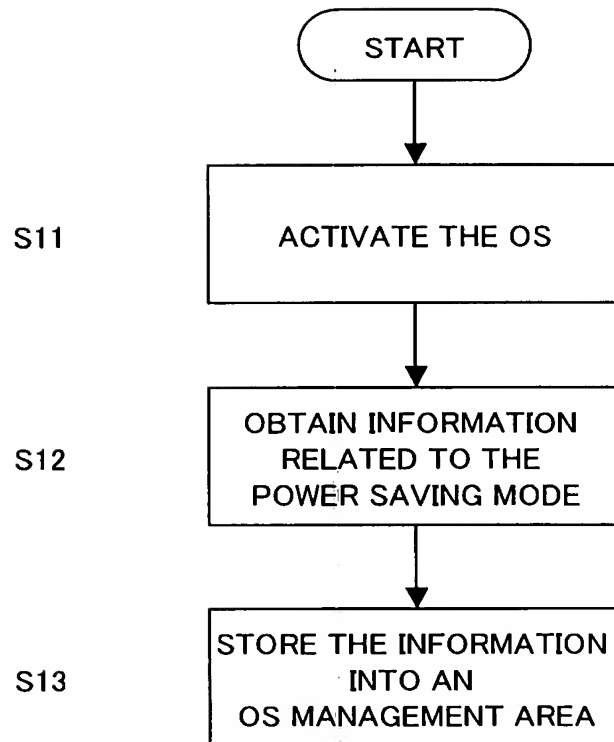


FIG. 9

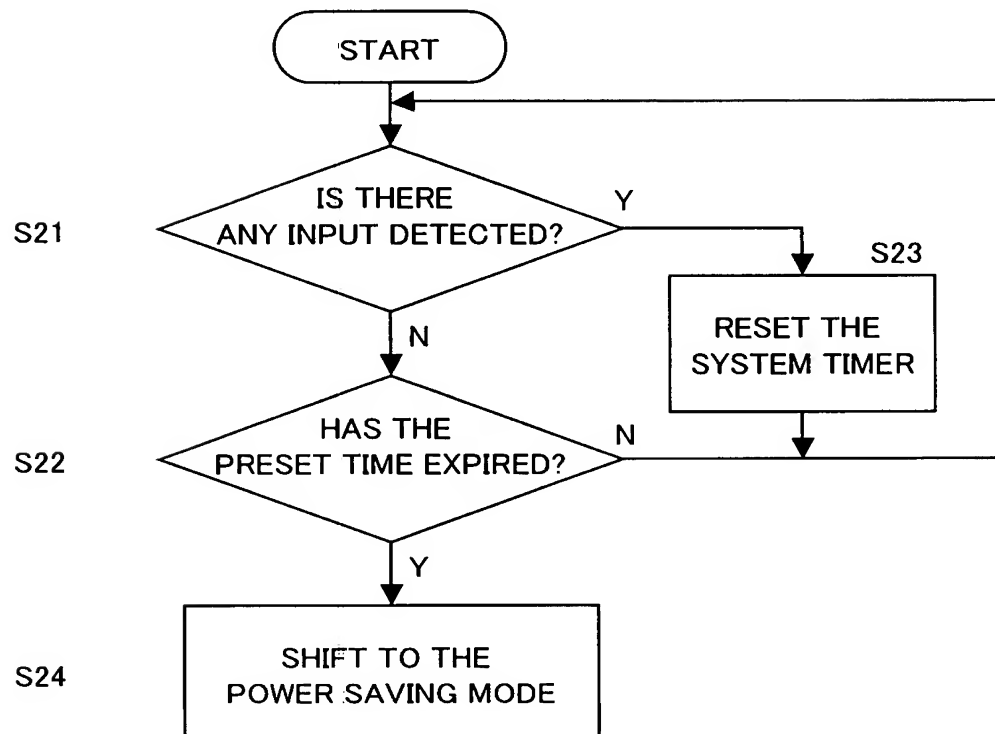


FIG. 10

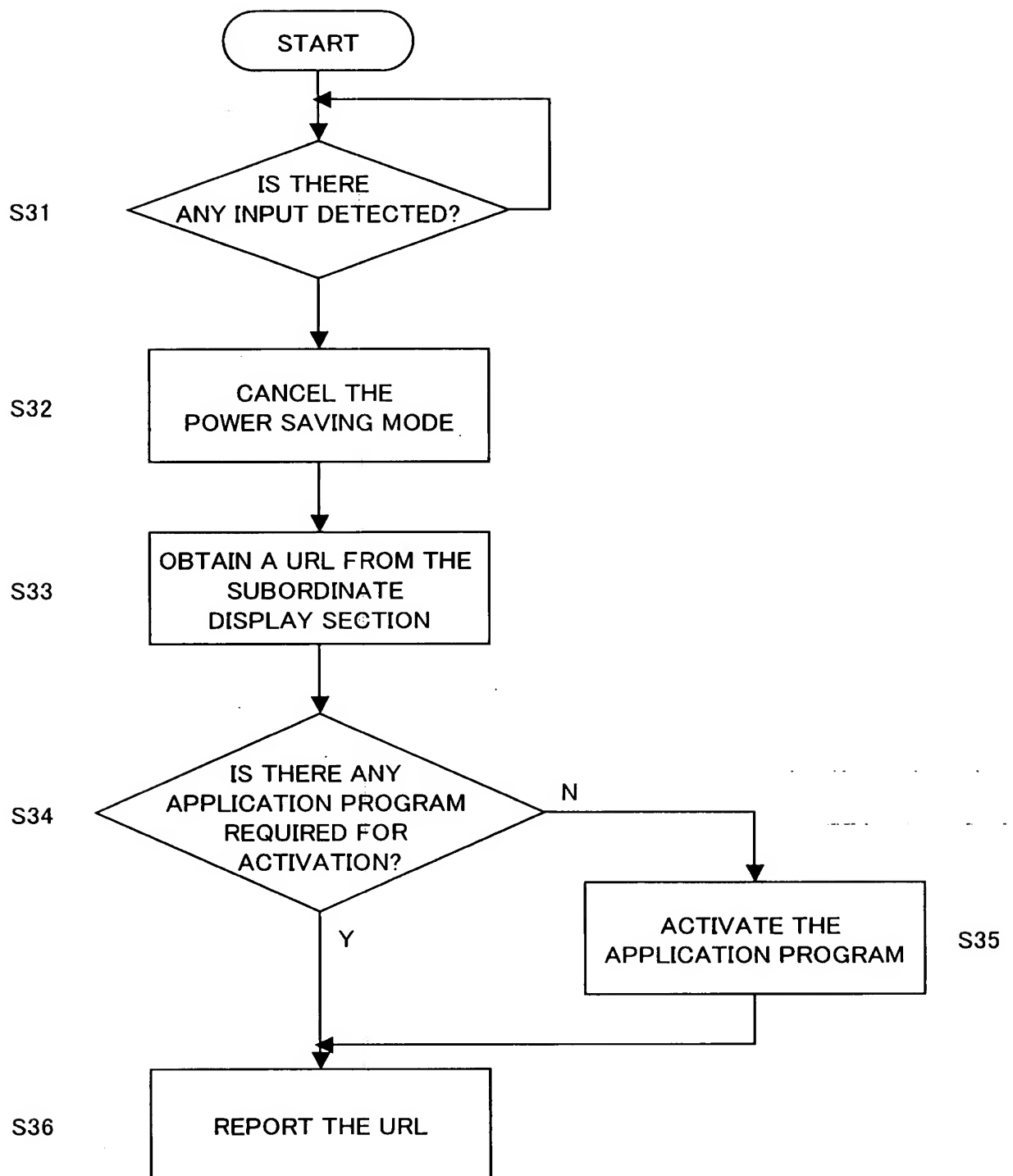


FIG. 11

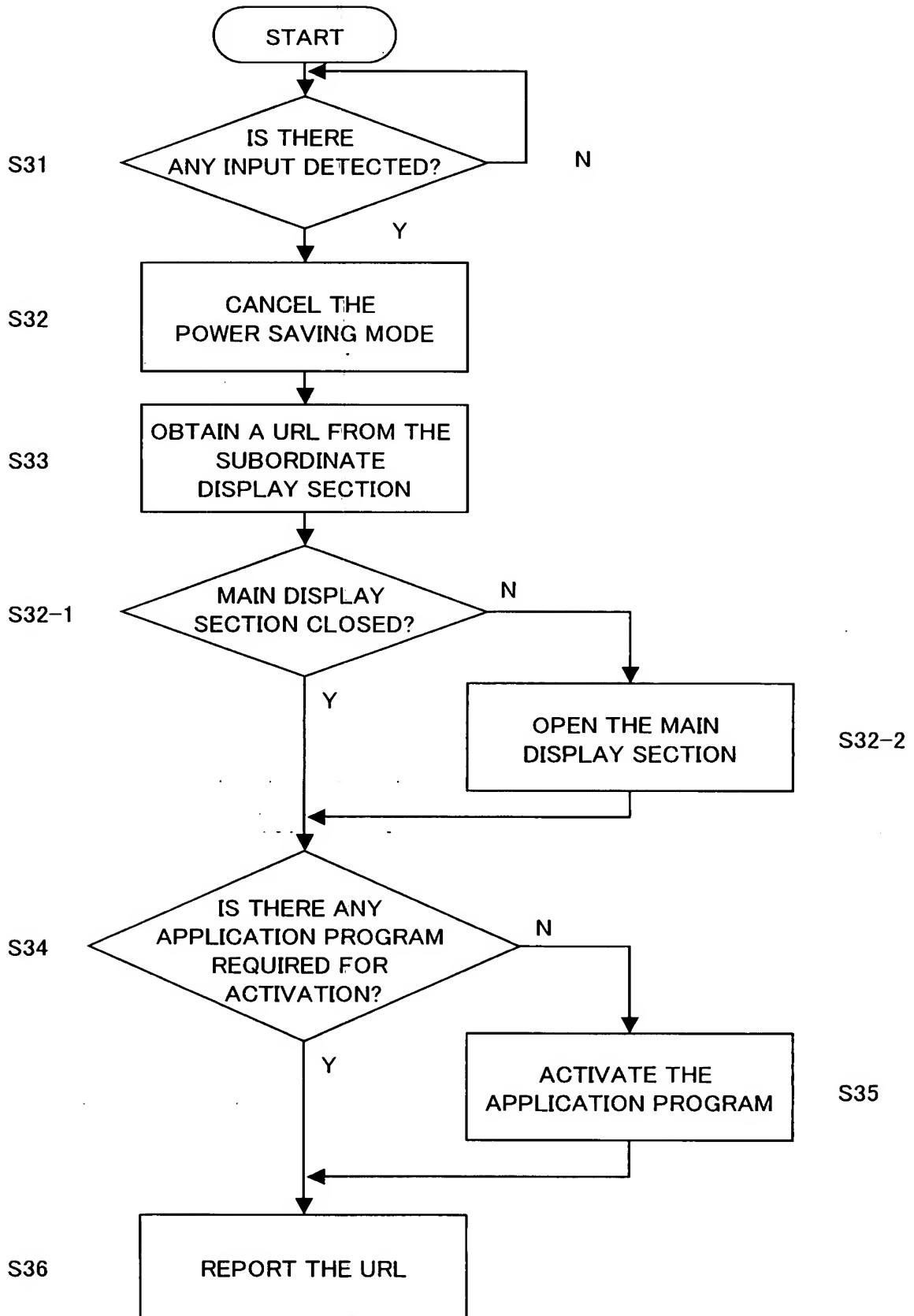


FIG. 12

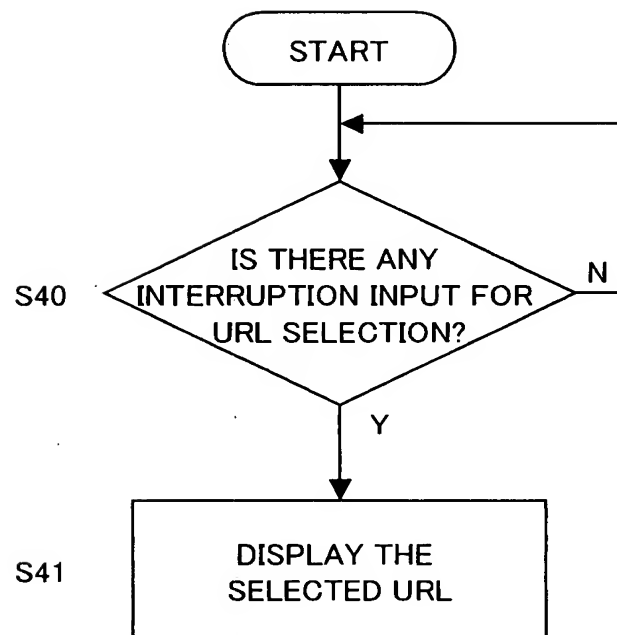


FIG. 13

IDENTIFICATION NUMBER	URL	DISPLAY CONTENTS (IDENTIFICATION INFORMATION)
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FIG. 14



(a)



(b)

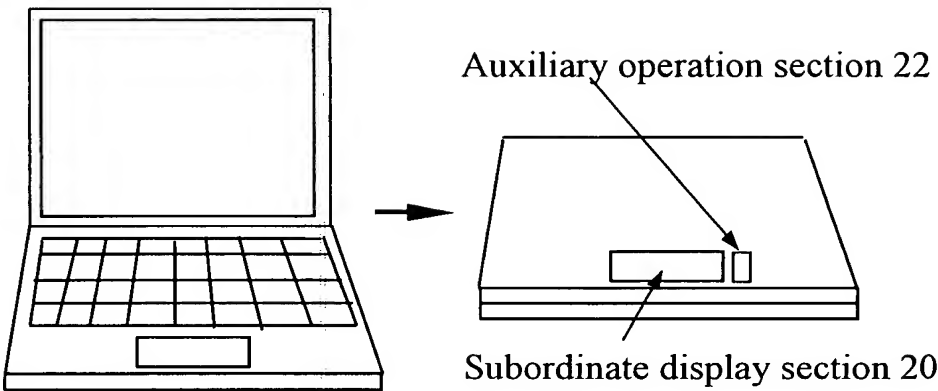


Selection Button

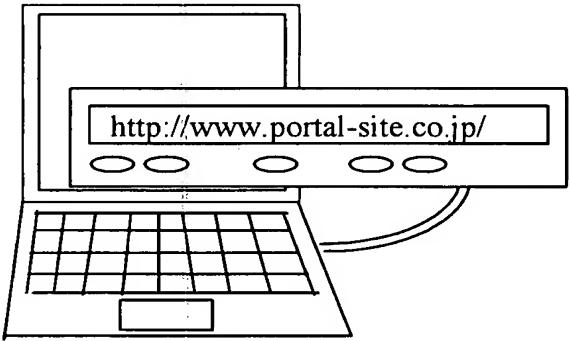
Execution Button

(c)

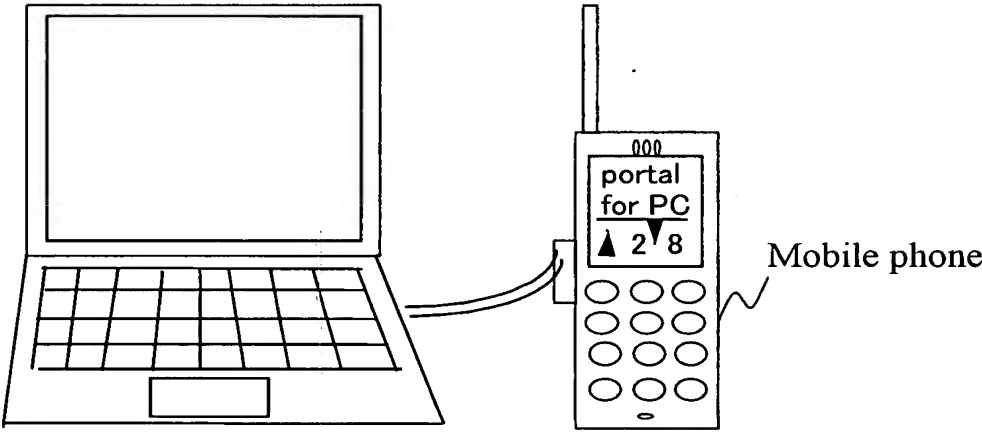
FIG. 15



(a)



(b)



(c)